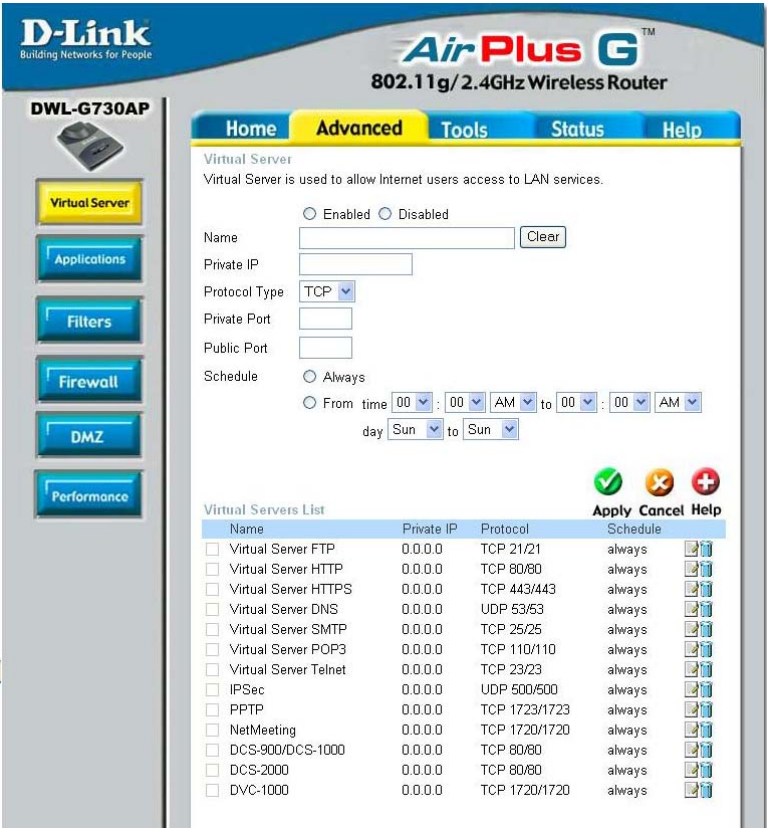


# Using the Configuration Utility in Router Mode (continued)

## Advanced > Virtual Server



The DWL-G730AP can be configured as a virtual server so that remote users accessing Web or FTP services via the public IP address can be automatically redirected to local servers in the LAN (Local Area Network).

The DWL-G730AP firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DWL-G730AP are invisible to the outside world. If you wish, you can make some of the LAN computers accessible from the Internet by enabling *Virtual Server*. Depending on the requested service, the DWL-G730AP redirects the external service request to the appropriate server within the LAN network.

The DWL-G730AP is also capable of port-redirection meaning incoming traffic to a particular port may be redirected to a different port on the server computer.

Each virtual service that is created will be listed at the bottom of the screen in the Virtual Servers List. There are pre-defined virtual services already in the table. You may use them by enabling them and assigning the server IP to use that particular virtual service.

# Using the Configuration Utility in Router Mode (continued)

## Advanced > Virtual Server (continued)

|                 |                                                                                                                                                                                                                                                                                                                                                               |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Virtual Server- | Select <b>Enabled</b> or <b>Disabled</b> .                                                                                                                                                                                                                                                                                                                    |
| Name-           | Enter the name referencing the virtual service.                                                                                                                                                                                                                                                                                                               |
| Private IP-     | The server computer in the LAN (Local Area Network) that will be providing the virtual services.                                                                                                                                                                                                                                                              |
| Protocol Type-  | The protocol used for the virtual service.                                                                                                                                                                                                                                                                                                                    |
| Private Port-   | The port number of the service used by the Private IP computer.                                                                                                                                                                                                                                                                                               |
| Public Port-    | The port number on the WAN (Wide Area Network) side that will be used to access the virtual service.                                                                                                                                                                                                                                                          |
| Schedule-       | The schedule of time when the virtual service will be enabled. The schedule may be set to <b>Always</b> , which will allow the particular service to always be enabled. If it is set to <b>From</b> , select the time frame for the service to be enabled. If the system time is outside of the scheduled time, the service will be disabled.                 |
| Example #1:     | <p>If you have a Web server that you wanted Internet users to access at all times, you would need to enable it. Web (HTTP) server is on LAN (Local Area Network) computer 192.168.0.25. HTTP uses port 80, TCP.</p> <p>Name: Web Server<br/>Private IP: 192.168.0.25<br/>Protocol Type: TCP<br/>Private Port: 80<br/>Public Port: 80<br/>Schedule: always</p> |

# Using the Configuration Utility in Router Mode (continued)

## Advanced > Virtual Server (continued)

| Virtual Servers List                                    |              |
|---------------------------------------------------------|--------------|
| Name                                                    | Private IP   |
| <input checked="" type="checkbox"/> Virtual Server HTTP | 192.168.0.25 |



Click on this icon to edit the virtual service



Click on this icon to delete the virtual service

### Example #2:

If you have an FTP server that you wanted Internet users to access by WAN port 2100 and only during the weekends, you would need to enable it as such. FTP server is on LAN computer 192.168.0.30. FTP uses port 21, TCP.

Name: FTP Server  
Private IP: 192.168.0.30  
Protocol Type: TCP  
Private Port: 21  
Public Port: 2100

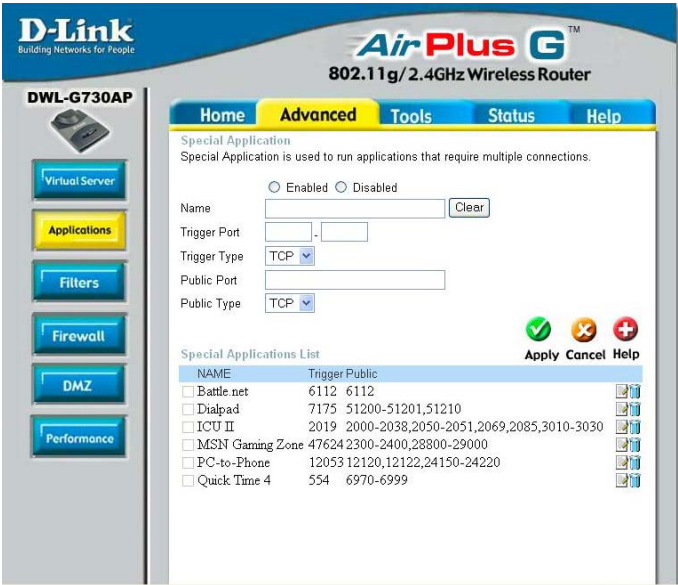
Schedule: From: 01:00AM to 01:00AM, Sat to Sun

All Internet users who want to access this FTP Server must connect to it from port 2100. This is an example of port redirection and can be useful in cases where there are many of the same servers on the LAN network.

# Using the Configuration Utility in Router Mode (continued)

## Advanced > Applications

Some applications such as Internet gaming, video conferencing, Internet telephony and others, require multiple connections. These applications save difficulties working through NAT (Network Address Translation). Special Applications makes some of these applications work with the DWL-G730AP. If you need to run applications that require multiple connections, specify the port normally associated with an application in the "Trigger Port" field, select the protocol type as TCP or UDP, then enter the public ports associated with the trigger port to open them for inbound traffic.



**Note!** Only one PC can use each Special Application tunnel.

- Name:** This is the name referencing the special application.
- Trigger Port:** This is the port used to trigger the application. It can be either a single port or a range of ports.
- Trigger Type:** This is the protocol used to trigger the special application.
- Public Port:** This is the port number on the WAN side that will be used to access the application. You may define a single port or a range of ports. You can use a comma to add multiple ports or port ranges.
- Public Type:** This is the protocol used for the special application.

### Special Applications List

The DWL-G730AP provides some predefined applications in the table on the bottom of the Web page. Select the application you want to use and enable it.

# Using the Configuration Utility in Router Mode (continued)

## Advanced > Filters > IP Filters

D-Link  
Building Networks for People

DWL-G730AP

Virtual Server

Applications

Filters

Firewall

DMZ

Performance

AirPlus G™  
802.11g/2.4GHz Wireless Router

HomeAdvancedToolsStatusHelp

Filters  
Filters are used to allow or deny LAN users from accessing the Internet.  
☒ IP Filters    ☐ URL Blocking  
☐ MAC Filters    ☐ Domain Blocking

IP Filters  
Use IP Filters to deny LAN IP addresses access to the Internet.  
☐ Enabled   ☐ Disabled     
IP  -   
Port  -   
Protocol Type   
Schedule ☐ Always  
☐ From time  :  AM to  :  AM  
day  to

ApplyCancelHelp

IP Filter List

|                          | IP Range | Protocol  | Schedule |  |
|--------------------------|----------|-----------|----------|--|
| <input type="checkbox"/> | *        | TCP 20-21 | always   |  |
| <input type="checkbox"/> | *        | TCP 80    | always   |  |
| <input type="checkbox"/> | *        | TCP 443   | always   |  |

Filters are used to deny or allow LAN (Local Area Network) computers from accessing the Internet. The DWL-G730AP can be setup to deny internal computers by their IP or MAC addresses. The DWL-G730AP can also block users from accessing restricted web sites.

- IP Filters:

Use IP Filters to deny LAN IP addresses from accessing the Internet. You can deny specific port numbers or all ports for the specific IP address.
- IP:

The IP address of the LAN computer that will be denied access to the Internet.
- Port:

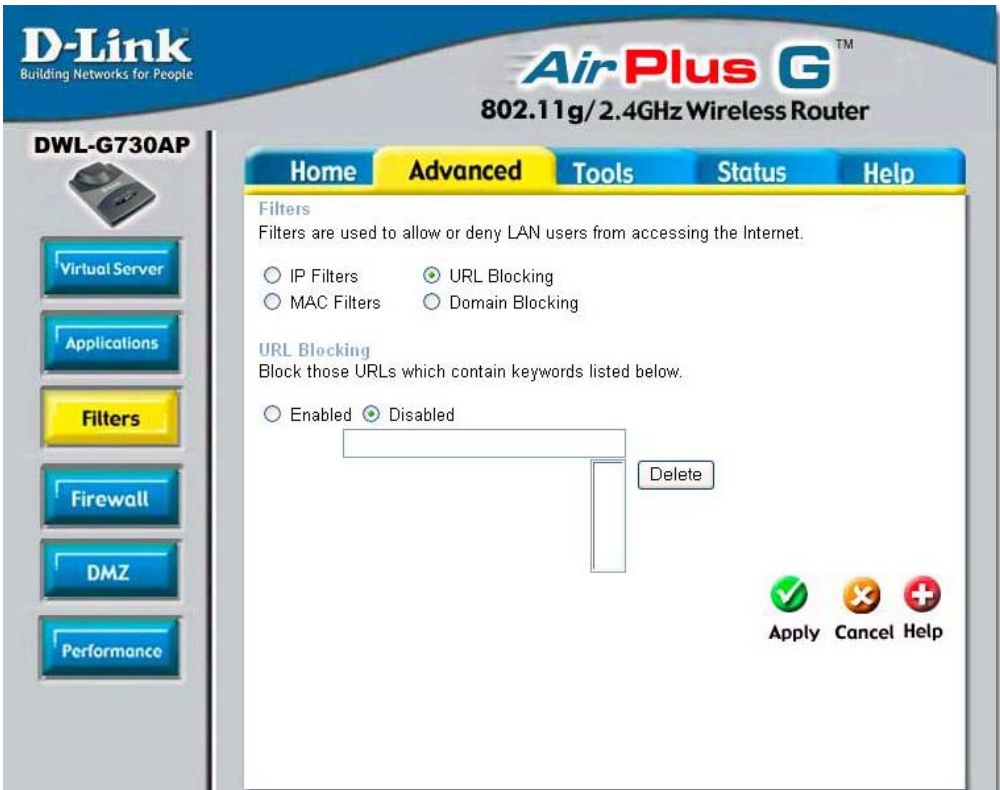
The single port or port range that will be denied access to the Internet.
- Protocol Type:

Select the protocol type
- Schedule:

This is the schedule of time when the IP Filter will be enabled.

# Using the Configuration Utility in Router Mode (continued)

## Advanced > Filters > URL Blocking



**URL Blocking:** Select **Enable** or **Disable**. Enter the words or word contained in the URL that you wish to block. Click **Apply** to activate the URL blocking.

**Delete:** Select the **URL block** that you want to delete. Click **Delete**.

**Apply:** Click **Apply** to save changes.

# Using the Configuration Utility in Router Mode (continued)

## Advanced > Filters > MAC Filters

**D-Link**  
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**AirPlus G™**  
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**DWL-G730AP**

Virtual Server  
Applications  
**Filters**  
Firewall  
DMZ  
Performance

Home **Advanced** Tools Status Help

**Filters**  
Filters are used to allow or deny LAN users from accessing the Internet.

☐ IP Filters ☐ URL Blocking  
☒ **MAC Filters** ☐ Domain Blocking

**MAC Filters**  
Use MAC address to allow or deny computers access to the network.

☒ Disabled MAC Filters  
☐ Only **allow** computers with MAC address listed below to access the network  
☐ Only **deny** computers with MAC address listed below to access the network

Name

MAC Address  -  -  -  -  -

DHCP Client

☒ ☐ ☐

**MAC Filter List**

| Name | MAC Address |
|------|-------------|
|------|-------------|

**Disable MAC Filters:**

Click to **Disable** MAC Filters.

**Allow:**

Allow only those devices with the listed MAC addresses access to the network.

**Deny:**

Deny the devices that are listed from accessing the network.

**Name:**

Enter a name for the device.

**Clear:**

Click Clear to erase the name.

**MAC Address:**

Enter the MAC address manually.

**Clone:**

Select the **DHCP Client** from the pull-down list and click **Clone** to enter the MAC address into the list.

**Apply:**

Click Apply to save the changes.

# Using the Configuration Utility in Router Mode (continued)

## Advanced > Filters > Domain Blocking

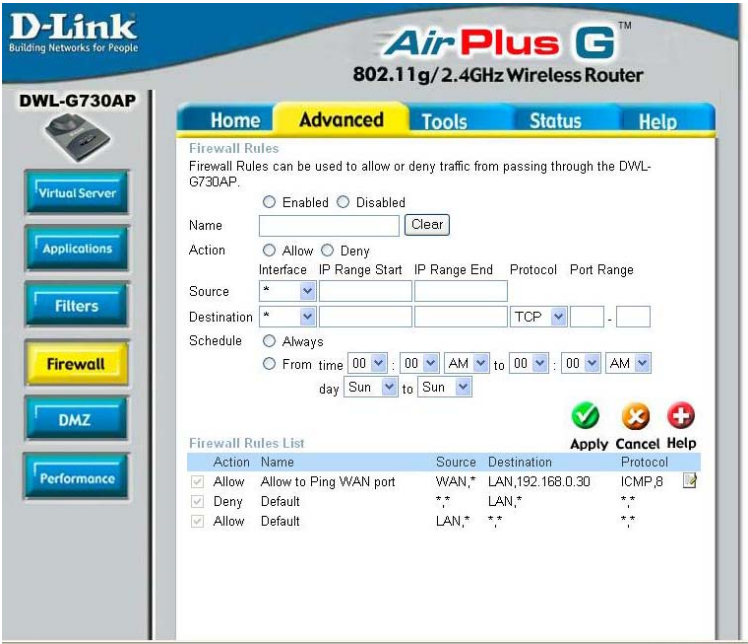


- Disable:** Click **Disable** to disable domain blocking.
- Allow:** Click **Allow** to allow access to all domains except **Blocked Domains**.
- Deny:** Click **Deny** to deny access to all domains except **Permitted Domains**.
- Permitted Domains:** Enter the permitted domains here. Click **Apply**.
- Blocked Domains:** Enter the blocked domains here. Click **Apply**.
- Delete:** Select a domain from either the permitted or blocked domain list, and click **Delete** to delete this domain.

# Using the Configuration Utility in Router Mode (continued)

## Advanced > Firewall

**Firewall Rules** is an advanced feature used to deny or allow traffic from passing through the DWL-G730AP. It works in the same way as IP Filters with additional settings. You can create more detailed access rules for the DWL-G730AP. When virtual services are created and enabled, it will also display in Firewall Rules. Firewall Rules contain all network firewall rules pertaining to IP (Internet Protocol).



### Note:

The DWL-G730AP MAC Address filtering rules have precedence over the Firewall Rules.

### Firewall Rules-

#### Name-

Enable or disable the Firewall

Enter the name

#### Action-

Allow or Deny

#### Source-

Enter the IP Address range

#### Destination-

Enter the IP Address range; the Protocol; and the Port Range

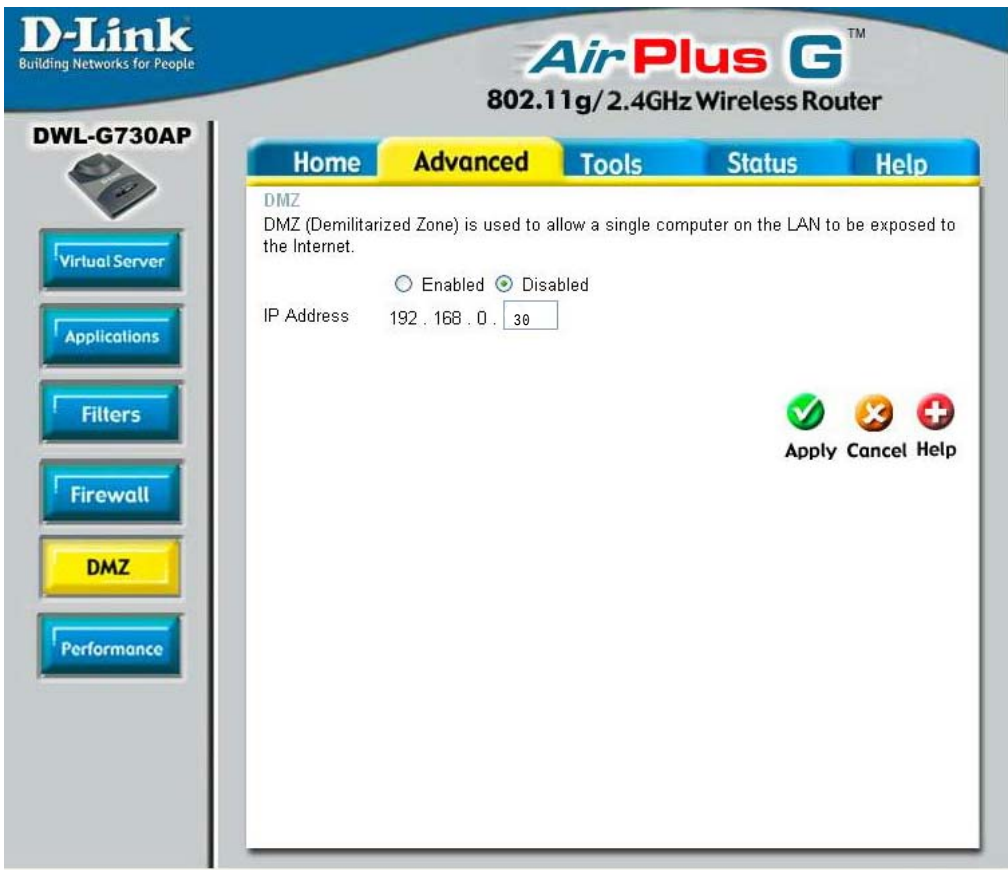
#### Schedule-

Select Always or enter the Time Range.

In the Firewall Rules List at the bottom of the screen, rules are prioritized from the top (highest priority) to the bottom (lowest priority.)

# Using the Configuration Utility in Router Mode (continued)

## Advanced > DMZ



If you have a client PC that cannot run Internet applications properly from behind the DWL-G730AP, then you can set the client up for unrestricted Internet access. Allowing a computer to be exposed to the Internet, this feature is useful for gaming purposes. Enter the IP address of the internal computer that will be the DMZ host. Using the DMZ (Demilitarized Zone) feature may expose your local network to a variety of security risks, so only use this option as a last resort.

### DMZ-

**Enable** or **Disable** the DMZ. The DMZ (Demilitarized Zone) allows a single computer to be exposed to the internet. By **default** the DMZ is **disabled**.

### IP Address-

Enter the **IP Address** of the computer to be in the **DMZ**

# Using the Configuration Utility in Router Mode (continued)

## Advanced > Performance

**Beacon Interval:** Beacons are packets sent by an access point to synchronize a wireless network. Specify a beacon interval value. Default (100) is recommended.

**RTS Threshold:** This value should remain at its default setting of 2432. If you encounter inconsistent data flow, only minor modifications to the value range between 256 and 2432 are recommended.

**Fragmentation:** This value should remain at its default setting of 2346. If you experience a high packet error rate, you may slightly increase your fragmentation threshold within the value range of 256 to 2346. Setting the fragmentation threshold too low may result in poor performance.

**DTIM Interval (Beacon Rate):** (Delivery Traffic Indication Message) Enter a value between 1 and 255 (default is 3) for the Delivery Traffic Indication Message (DTIM.) A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.

**TX Rates:** Select the transmission rate for the network. The default setting is Auto.

**Mode Setting:** For utmost speed, select **G Mode** to include only 802.11g devices in your network. Select **Mix Mode** to include 802.11g and 802.11b devices in your network.

**Preamble:** **Short Preamble** is the default setting. (High traffic networks should use the shorter preamble type.) The preamble defines the length of the CRC block (Cyclic Redundancy Check is a common technique for detecting data transmission errors) used in communication between the access point and the wireless network adapters.

### Authentication:

Select **Open System** to communicate the key across the network.

Select **Shared Key** to limit communication only to those devices that share the same WEP settings.

Select **WPA-PSK** to select *Wi-Fi Protected Access* without a RADIUS server.

**SSID Broadcast:** (Service Set Identifier) Enable or Disable (default) the broadcast of the SSID name across the network. SSID is a name that identifies a wireless network. All devices on a network must use the same SSID to establish communication.

**Antenna Transmit Power:** Select the transmission power of the antenna. Limiting antenna power can be useful for security purposes.



# Using the Configuration Utility in Router Mode (continued)

## Tools > Admin

The screenshot shows the D-Link AirPlus G 802.11g/2.4GHz Wireless Router configuration utility. The interface has a blue header with the D-Link logo and 'AirPlus G' branding. Below the header, there are tabs for 'Home', 'Advanced', 'Tools', 'Status', and 'Help'. The 'Tools' tab is selected, and the 'Admin' sub-tab is active. The left sidebar contains a 'DWL-G730AP' icon and buttons for 'Admin', 'Time', 'System', 'Firmware', and 'Misc.'. The main content area is titled 'Administrator Settings' and contains the following sections:

- Administrator Settings**: Administrators can change their login password.
- Administrator (The Login Name is "admin")**: Fields for 'New Password' and 'Confirm Password'.
- User (The Login name is "user")**: Fields for 'New Password' and 'Confirm Password'.
- Remote Management**: A section with a radio button for 'Enabled' (selected) and 'Disabled'. Below it are fields for 'IP Address' (containing an asterisk) and 'Port' (set to 8080).

At the bottom right, there are three buttons: 'Apply' (green checkmark), 'Cancel' (orange X), and 'Help' (red plus).

At this page, the DWL-G730AP administrator can change the system password. There are two accounts that can access the router's Web-management interface. They are **admin** and **user**. **Admin** has read/write access while **user** has read-only access. The **user** can only view the settings but cannot make any changes.

**Administrator-** **admin** is the **Administrator login name**

**Password-** Enter the password and enter again to confirm

**User-** **user** is the **User login name**

**Password-** Enter the password and enter again to confirm

**Remote Management-** Remote management allows the DWL-G730AP to be configured from the Internet by a Web browser. A username and password is still required to access the Web-management interface. In general, only a member of your network can browse the built-in Web pages to perform **Administrator** tasks. This feature enables you to perform Administrator tasks from the remote (Internet) host.

**IP Address-** The Internet IP address of the computer that has access to the router. If you input an asterisk (\*) into this field, then any computer will be able to access the router. Putting an asterisk (\*) into this field would present a security risk and is not recommended.

**Port-** The port number used to access the router.

**Example-** <http://x.x.x.x:8080> where x.x.x.x is the WAN IP address of the router and 8080 is the port used for the Web-management interface.

# Using the Configuration Utility in Router Mode (continued)

## Tools > Time

The screenshot shows the configuration utility for a D-Link DWL-G730AP router. The interface has a blue header with the D-Link logo and 'AirPlus G 802.11g/2.4GHz Wireless Router'. Below the header is a navigation bar with tabs: Home, Advanced, Tools (selected), Status, and Help. On the left is a sidebar with buttons: Admin, Time (selected), System, Firmware, and Misc. The main content area is titled 'Time' and contains the following fields:

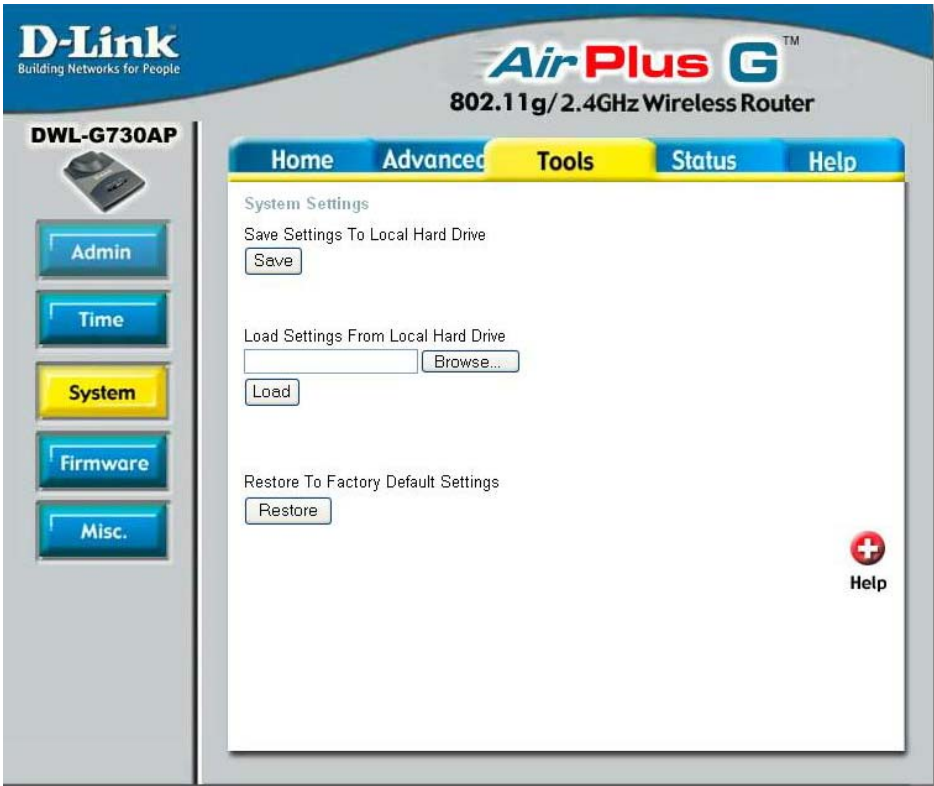
- Local Time:** Apr/01/2002 00:21:48
- Time Zone:** (GMT-08:00) Pacific Time (US & Canada) [pull-down menu]
- Default NTP Server:** [text box] (optional)
- Set the Time:**
  - Year: 2002 [pull-down]
  - Month: Apr [pull-down]
  - Day: 01 [pull-down]
  - Hour: 00 [pull-down]
  - Minute: 21 [pull-down]
  - Second: 48 [pull-down]
  - Set Time** button
- Daylight Saving:**
  - ☐ Enabled
  - ☒ Disabled
  - Start: Jan [pull-down] 01 [pull-down]
  - End: Jan [pull-down] 01 [pull-down]

At the bottom right are three buttons: Apply (green checkmark), Cancel (orange X), and Help (red plus).

- Time Zone-** Select the time zone from the pull-down menu.
- Default NTP Server-** NTP is short for *Network Time Protocol*. NTP synchronizes computer clock times in a network of computers. This field is optional.
- Set the Time-** To manually input the time, enter the values in these fields for the year, month, day, hour, minute, and second. Click **Set Time**.
- Daylight Saving-** To select daylight saving time manually, select **enabled** or **disabled**, and enter a start date and an end date for daylight saving time.

# Using the Configuration Utility in Router Mode (continued)

## Tools > System



The current system settings can be saved as a file onto the local hard drive. To reload a system settings file, click on **Browse** to browse the local hard drive and locate the system file to be used.

### Save Settings to Local Hard Drive-

Click **Save** to save the current settings to the local hard drive

### Load Settings from Local Hard Drive-

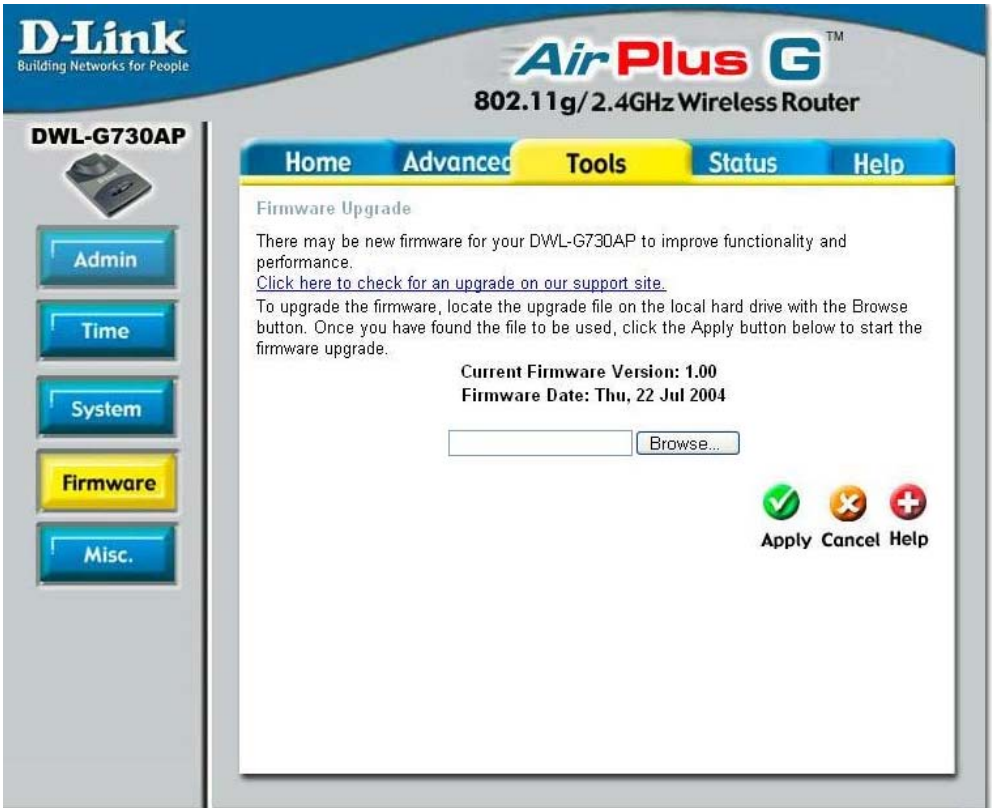
Click **Browse** to find the settings, then click **Load**

### Restore to Factory Default Settings-

Click **Restore** to restore the factory default settings

# Using the Configuration Utility in Router Mode (continued)

## Tools > Firmware



You can upgrade the firmware of the router here. Make sure the firmware you want to use is on the local hard drive of the computer. Please check the D-Link support site for firmware updates at <http://support.dlink.com>. You can download firmware upgrades to your hard drive from the D-Link support site. After you have downloaded the firmware upgrade to your hard drive, click **Browse** to browse the local hard drive and locate the firmware to be used for the update.

**Firmware Upgrade-** Click on the link in this screen to find out if there is updated firmware; if so, download the new firmware to your hard drive.

**Browse-** After you have downloaded the new firmware, click **Browse** in this window to locate the firmware update on your hard drive. Click **Apply** to complete the firmware upgrade.

# Using the Configuration Utility in Router Mode (continued)

## Tools > Misc

**Ping Test-** The ping test is used to send ping packets to test if a computer is on the Internet. Enter the IP address that you wish to ping, and click **Ping**.

**Restart Device-** Click **Reboot** to restart the DWL-G730AP.

**Block WAN Ping-** If you choose to block WAN ping, the WAN IP address of the DWL-G730AP will not respond to pings. Blocking the ping may provide some extra security from hackers.

*Discard Ping from WAN side*  
Click **Enabled** to block the WAN ping

**UPNP-** To use the *Universal Plug and Play* feature click on **Enabled**. UPnP provides compatibility with networking equipment, software and peripherals of the over 400 vendors that cooperate in the Plug and Play forum.

**Gaming Mode-** Gaming mode allows a form of pass-through for certain Internet games. If you are using Xbox, Playstation2 or a PC, make sure you are using the latest firmware and Gaming Mode is enabled. To utilize Gaming Mode, click **Enabled**. If you are not using a Gaming application, it is recommended that you **Disable** Gaming Mode.

**VPN Pass Through-** The DWL-G730AP supports VPN (Virtual Private Network) pass-through for both PPTP (Point-to-Point Tunneling Protocol) and IPsec (IP Security). Once VPN pass-through is enabled, there is no need to open up virtual services. Multiple VPN connections can be made through the DWL-G730AP. This is useful when you have many VPN clients on the LAN network.

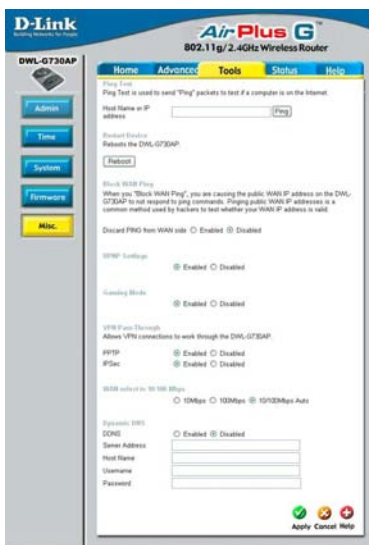
**PPTP-** select **Enabled** or **Disabled**

**IPSec-** select **Enabled** or **Disabled**

**WAN select to 10/100Mbps-** Select the data rate : 10Mbps, 100Mbps or 10/100Mbps Auto.

**Dynamic DNS-** Dynamic Domain Name System is a method of keeping a domain name linked to a changing IP Address. This is a useful feature since many computers do not use a static IP address. Enter the IP address and Host Name of the Domain Name Server. Enter your Username and Password.

**Apply-** Click **Apply** to save the changes.



# Using the Configuration Utility in Router Mode (continued)

## Status > Device Info

This page displays the current information for the DWL-G730AP. It will display the LAN, WAN and MAC address information.

If your WAN connection is set up for a **Dynamic IP address** then a **Release** button and a **Renew** button will be displayed. Use *Release* to disconnect from your ISP and use *Renew* to connect to your ISP.

If your WAN connection is set up for **PPPoE**, a **Connect** button and a **Disconnect** button will be displayed. Use *Disconnect* to drop the PPPoE connection and use *Connect* to establish the PPPoE connection.



This window will display the following settings:

### LAN

MAC address of the DWL-G730AP  
IP Address: LAN/Private IP address of the DWL-G730AP  
Subnet Mask: LAN/Private subnet mask  
DHCP Server (Enabled or Disabled)

### WAN

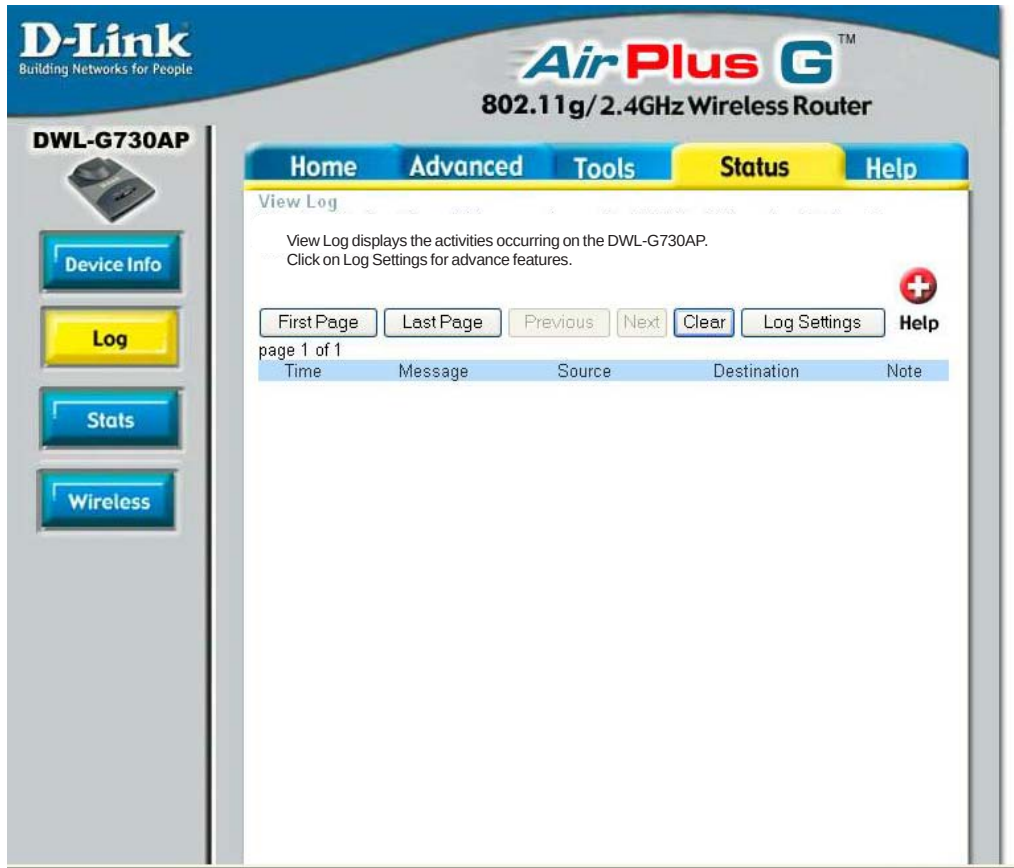
MAC address of the DWL-G730AP  
Client connection (DHCP or PPoE client status)  
IP address: WAN/Public IP address  
Subnet Mask: WAN/Public subnet mask  
Gateway: WAN/Public Gateway IP address  
Domain Name Server: WAN/Public DNS IP address

### Wireless

MAC Address: Displays the MAC address  
SSID: Displays the current SSID  
Channel: Displays the current channel  
WEP: indicates whether WEP is enabled or disabled

# Using the Configuration Utility in Router Mode (continued)

Status > Log



The DWL-G730AP keeps a running log of events and activities. If the device is rebooted, the logs are automatically cleared. You may save the log files under Log Settings.

## View Log-

- First Page** - The first page of the log
- Last Page** - The last page of the log
- Previous** - Moves back one log page
- Next** - Moves forward one log page
- Clear** - Clears the logs completely
- Log Settings** - Brings up the page to configure the log

# Using the Configuration Utility in Router Mode (continued)

## Status > Stats

This screen displays the Traffic Statistics. Here you can view the amount of packets that pass through the DWL-G730AP on both the WAN and the LAN ports. The traffic counter will reset if the device is rebooted. Click **Refresh** to view the latest statistics. Click **Reset** to reset.

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DWL-G730AP

Device Info

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Traffic Statistics

Traffic Statistics display Receive and Transmit packets passing through the DWL-G730AP.

Refresh

Reset

Receive

Transmit

|          |           |           |
|----------|-----------|-----------|
| WAN      | 0 Packets | 0 Packets |
| LAN      | 6 Packets | 0 Packets |
| WIRELESS | 6 Packets | 5 Packets |

Help

## Status > Wireless

The wireless client table displays a list of current connected wireless clients. This table also displays the connection time and MAC address of the connected wireless client. Click on **Help** at any time, for more information.

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Help

Connected Wireless Client List

The Wireless Client table below displays Wireless clients Connected to the AP (Access Point).

Connected Time

MAC Address

|                      |                   |
|----------------------|-------------------|
| Apr/01/2002 00:41:46 | 00-00-88-A0-8C-98 |
|----------------------|-------------------|

Help

# Networking Basics

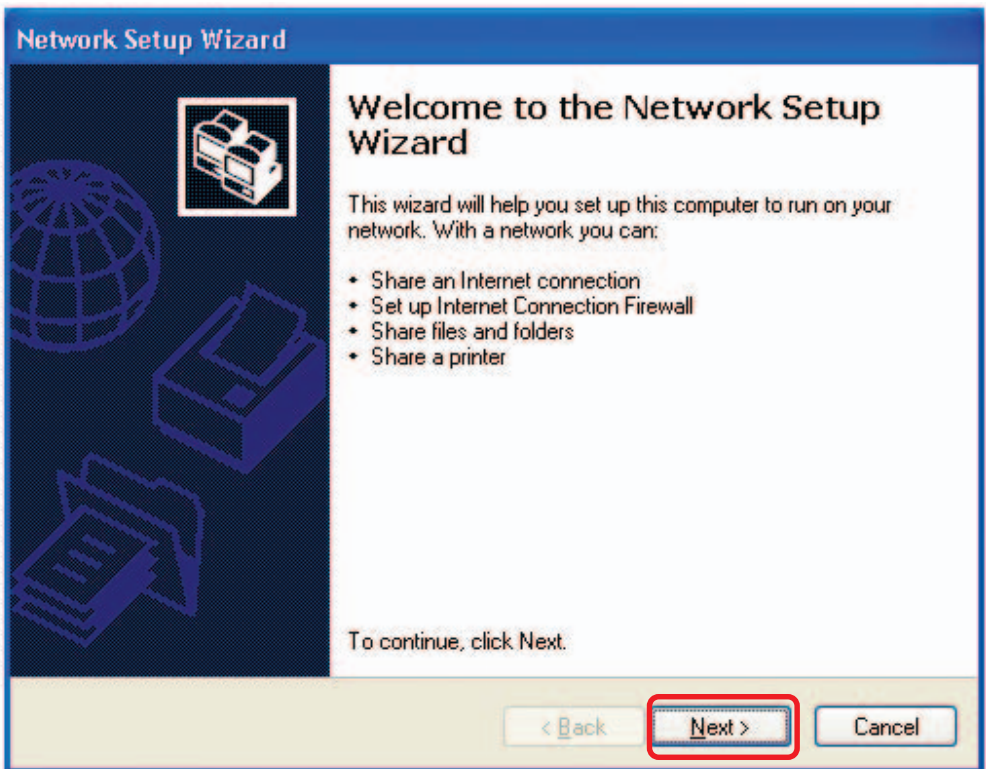
## Using the Network Setup Wizard in Windows XP

In this section you will learn how to establish a network at home or work, using **Microsoft Windows XP**.

*Note: Please refer to websites such as <http://www.homenethelp.com> and <http://www.microsoft.com/windows2000> for information about networking computers using Windows 2000, Me or 98SE.*

Go to **Start>Control Panel>Network Connections**

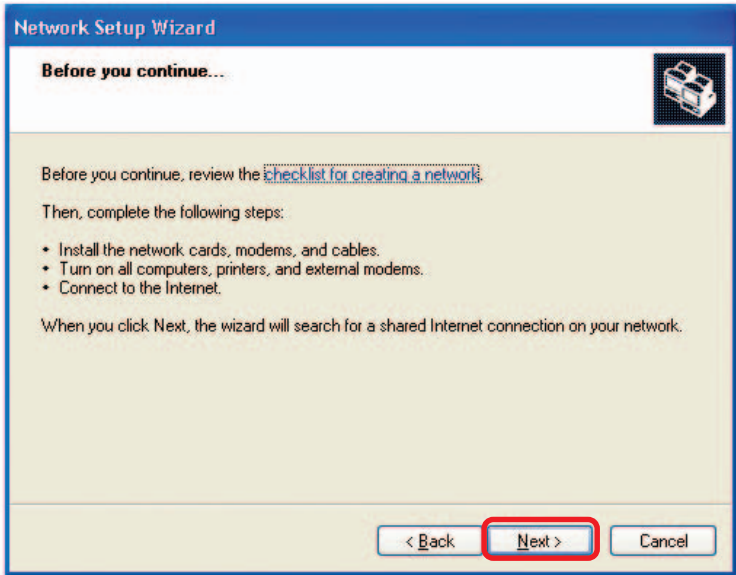
Select **Set up a home or small office network**



When this screen appears, click **Next**.

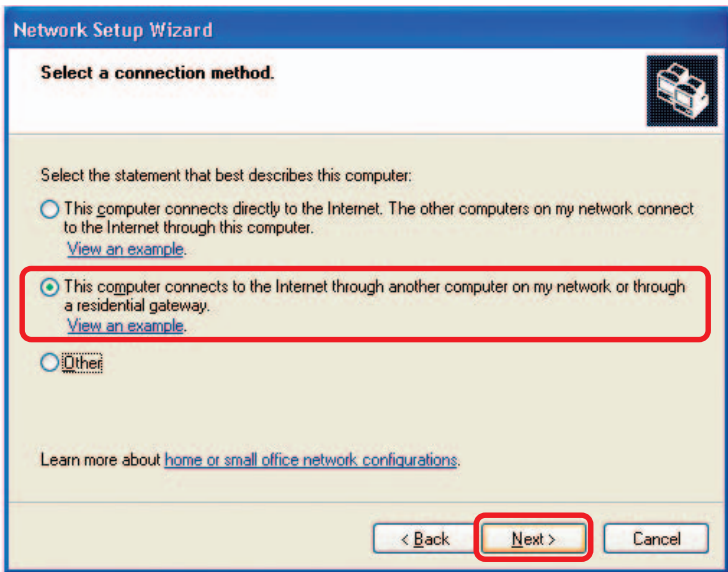
## Networking Basics (continued)

Please follow all the instructions in this window:



Click **Next**.

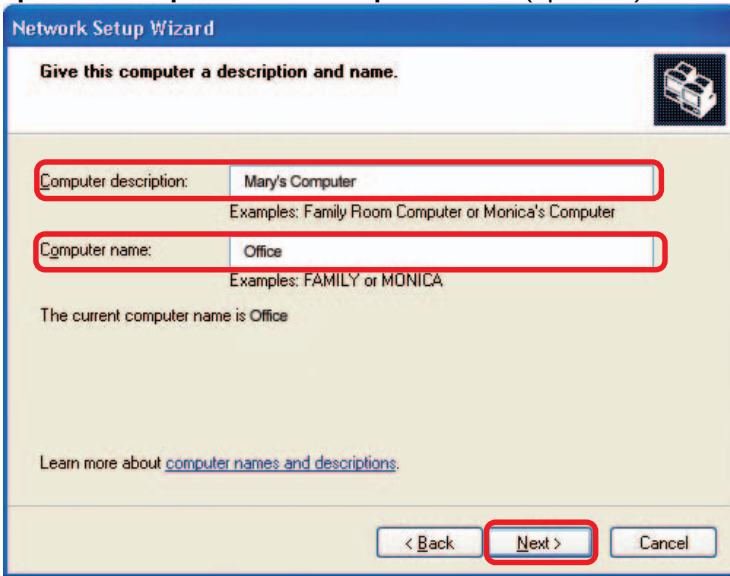
In the following window, select the best description of your computer. If your computer connects to the internet through a gateway/router, select the second option as shown.



Click **Next**.

## Networking Basics (continued)

Enter a **Computer description** and a **Computer name** (optional.)



The screenshot shows the 'Network Setup Wizard' window with the title 'Give this computer a description and name.' The window has a blue header bar and a small icon of a computer in the top right corner. Below the title bar, there are two text input fields. The first field is labeled 'Computer description:' and contains the text 'Mary's Computer'. Below this field, there is a line of text that says 'Examples: Family Room Computer or Monica's Computer'. The second field is labeled 'Computer name:' and contains the text 'Office'. Below this field, there is a line of text that says 'Examples: FAMILY or MONICA'. Below the input fields, there is a line of text that says 'The current computer name is Office'. At the bottom of the window, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a red rectangle.

Network Setup Wizard

Give this computer a description and name.

Computer description: Mary's Computer  
Examples: Family Room Computer or Monica's Computer

Computer name: Office  
Examples: FAMILY or MONICA

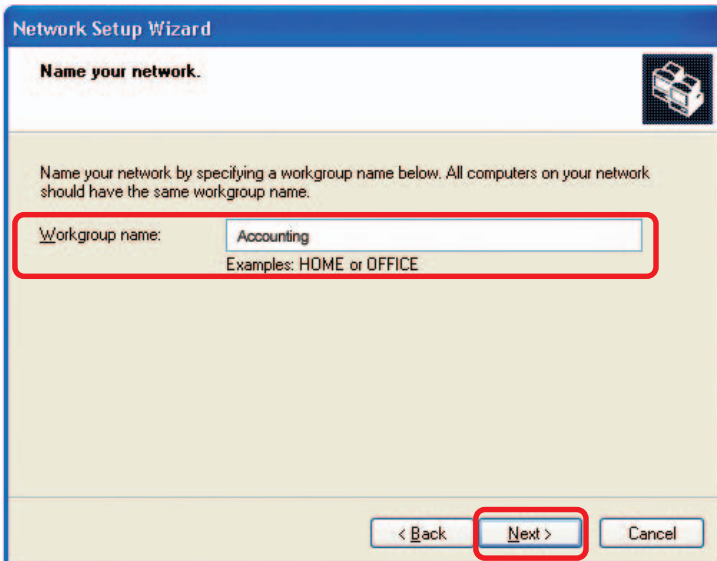
The current computer name is Office

Learn more about [computer names and descriptions](#).

< Back Next > Cancel

Click **Next**.

Enter a **Workgroup** name. All computers on your network should have the same **Workgroup** name.



The screenshot shows the 'Network Setup Wizard' window with the title 'Name your network.' The window has a blue header bar and a small icon of a computer in the top right corner. Below the title bar, there is a line of text that says 'Name your network by specifying a workgroup name below. All computers on your network should have the same workgroup name.' Below this text, there is a text input field labeled 'Workgroup name:' which contains the text 'Accounting'. Below the input field, there is a line of text that says 'Examples: HOME or OFFICE'. At the bottom of the window, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a red rectangle.

Network Setup Wizard

Name your network.

Name your network by specifying a workgroup name below. All computers on your network should have the same workgroup name.

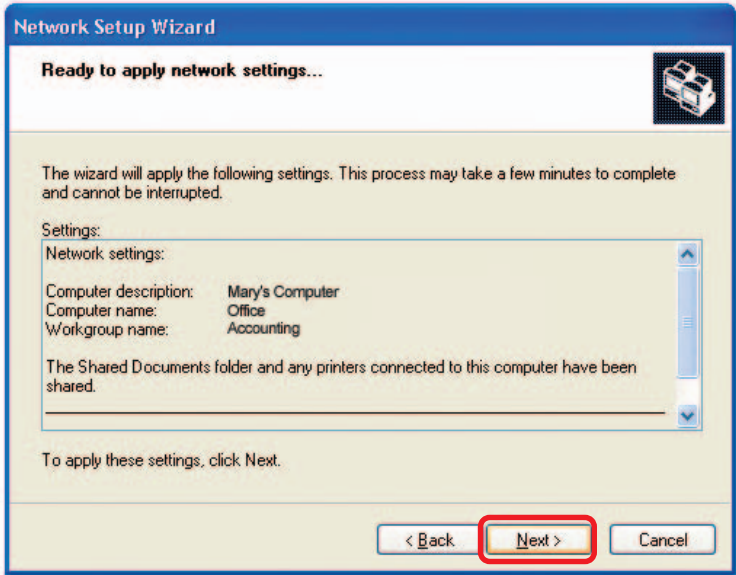
Workgroup name: Accounting  
Examples: HOME or OFFICE

< Back Next > Cancel

Click **Next**.

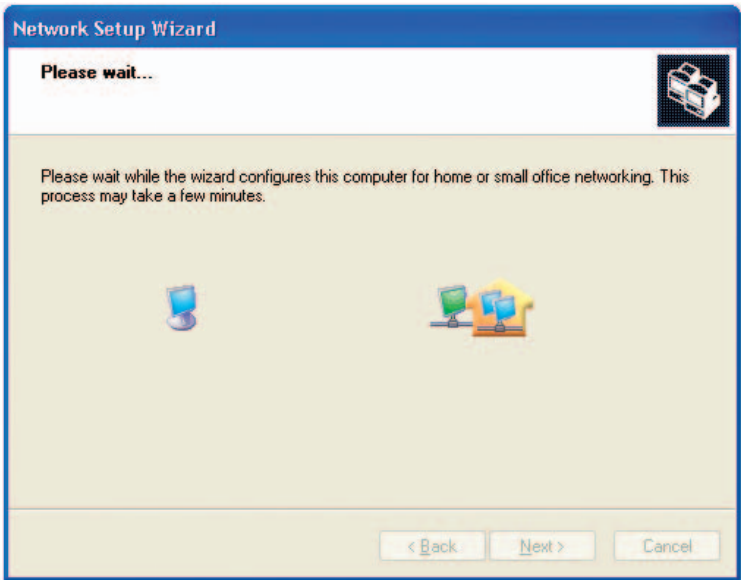
# Networking Basics (continued)

Please wait while the **Network Setup Wizard** applies the changes.



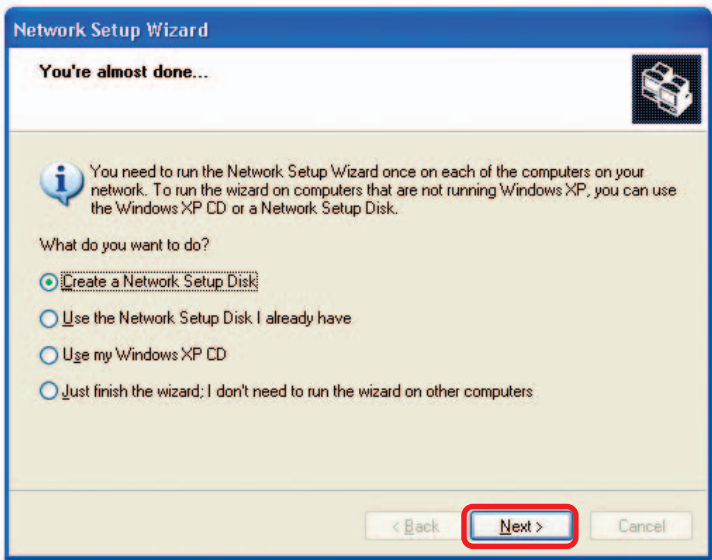
When the changes are complete, click **Next**.

Please wait while the **Network Setup Wizard** configures the computer. This may take a few minutes.

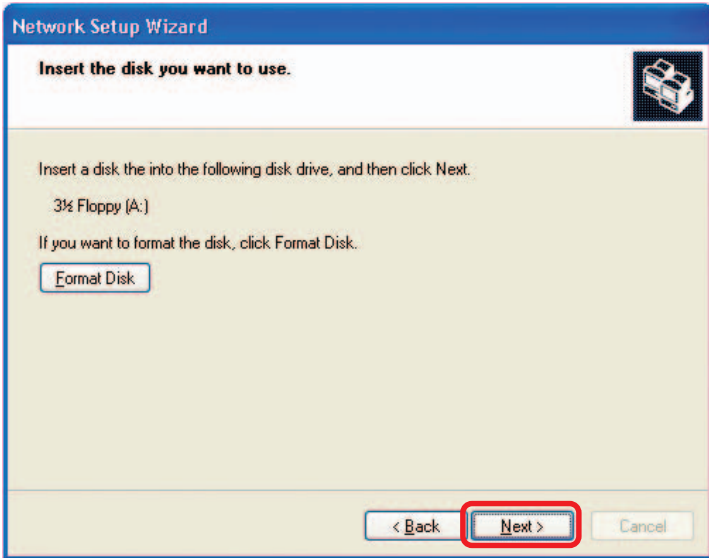


## Networking Basics (continued)

In the window below, select the option that fits your needs. In this example, **Create a Network Setup Disk** has been selected. You will run this disk on each of the computers on your network. Click **Next**.

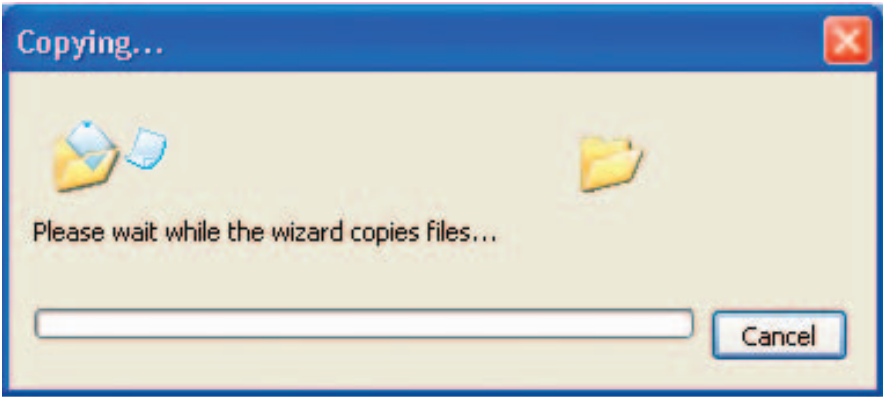


Insert a disk into the Floppy Disk Drive, in this case drive **A**.

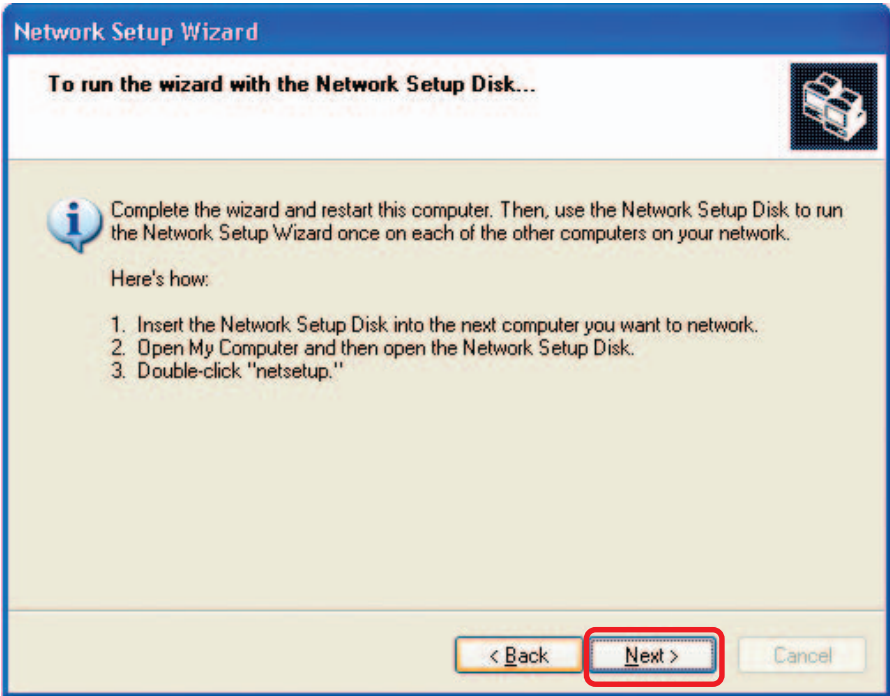


## Networking Basics (continued)

Please wait while the **Network Setup Wizard** copies the files.

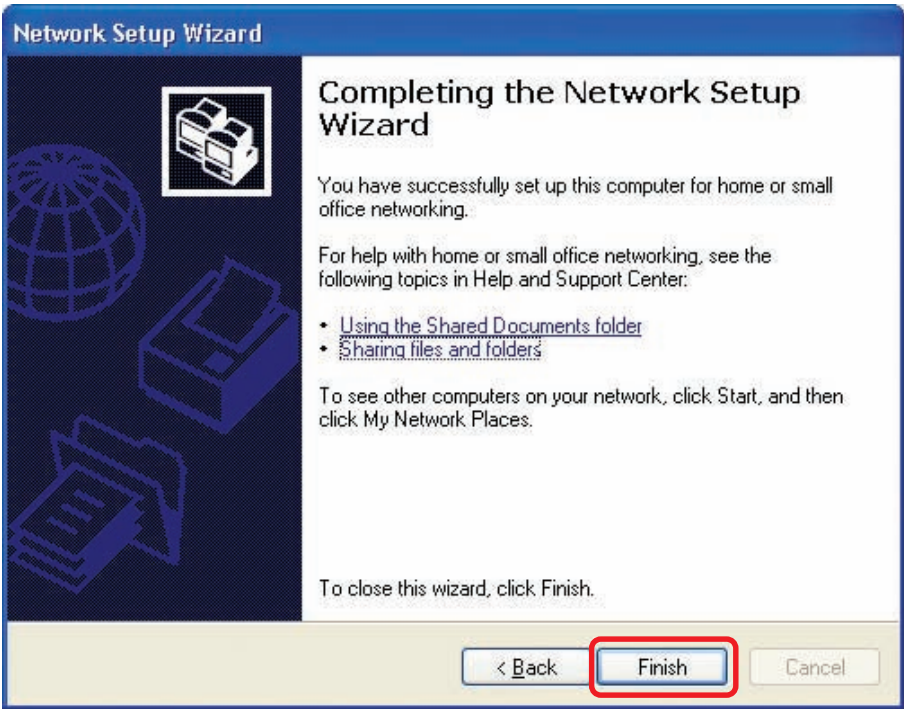


Please read the information under **Here's how** in the screen below. After you complete the **Network Setup Wizard** you will use the **Network Setup Disk** to run the **Network Setup Wizard** once on each of the computers on your network. To continue click **Next**.

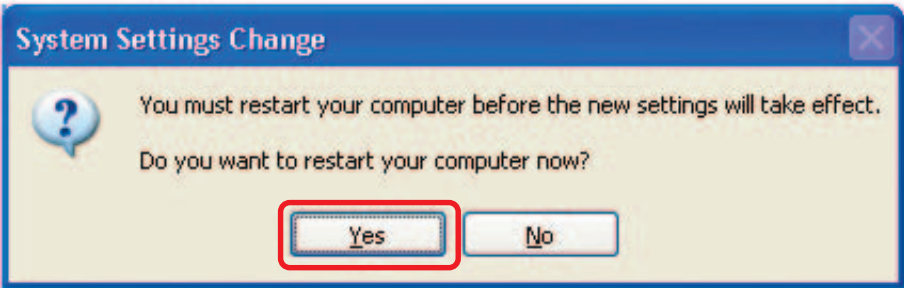


## Networking Basics (continued)

Please read the information on this screen, then click **Finish** to complete the **Network Setup Wizard**.



The new settings will take effect when you restart the computer. Click **Yes** to restart the computer.



You have completed configuring this computer. Next, you will need to run the **Network Setup Disk** on all the other computers on your network. After running the **Network Setup Disk** on all your computers, your new wireless network will be ready to use.

## Networking Basics (continued)

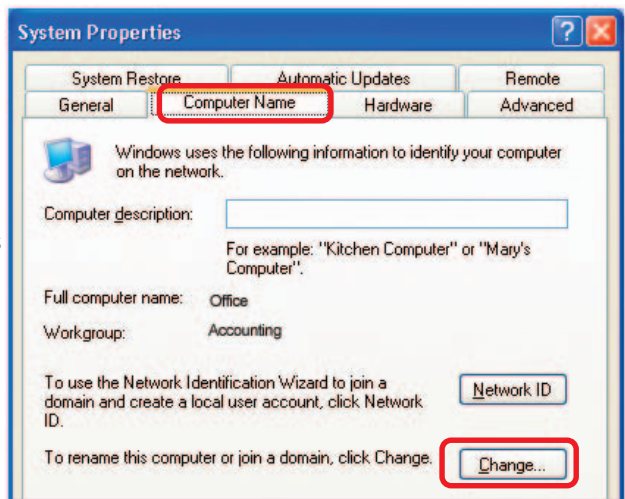
### Naming your Computer

To name your computer, please follow these directions: In **Windows XP**:

- Click **Start** (in the lower left corner of the screen).
- **Right-click** on **My Computer**.
- Select **Properties** and click.



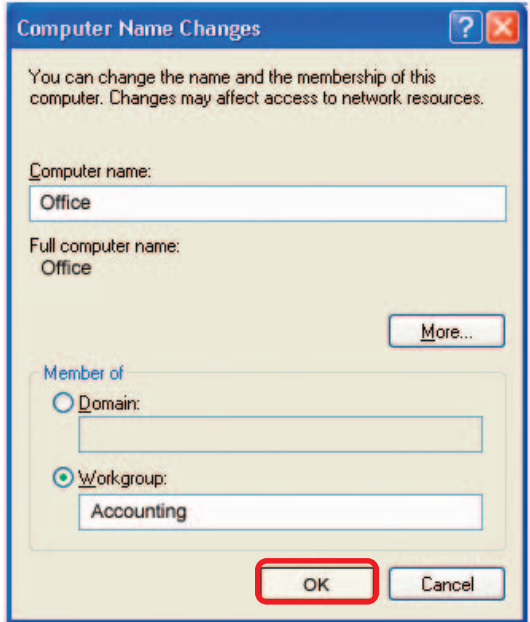
- Select the **Computer Name Tab** in the System Properties window.
- You may enter a **Computer Description** if you wish; this field is optional.
- To rename the computer and join a domain, Click **Change**.



## Networking Basics (continued)

### Naming your Computer

- In this window, enter the **Computer name**.
- Select **Workgroup** and enter the name of the **Workgroup**.
- All computers on your network must have the same **Workgroup** name.
- Click **OK**.



### Checking the IP Address in Windows XP

The wireless adapter-equipped computers in your network must be in the same IP Address range (see Getting Started in this manual for a definition of IP Address Range.) To check on the IP Address of the adapter, please do the following:

- Right-click on the **Local Area Connection icon** in the task bar.
- Click on **Status**.

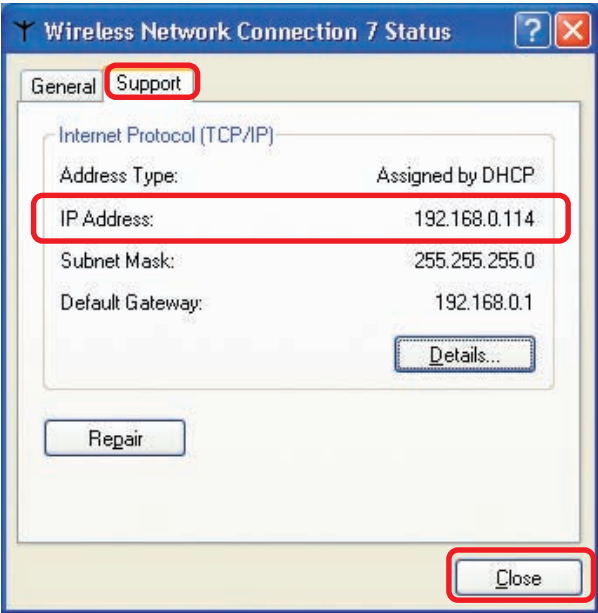


**Networking Basics (continued)**  
***Checking the IP Address in Windows XP***

This window will appear.

- Click the **Support** tab.

- Click **Close**.

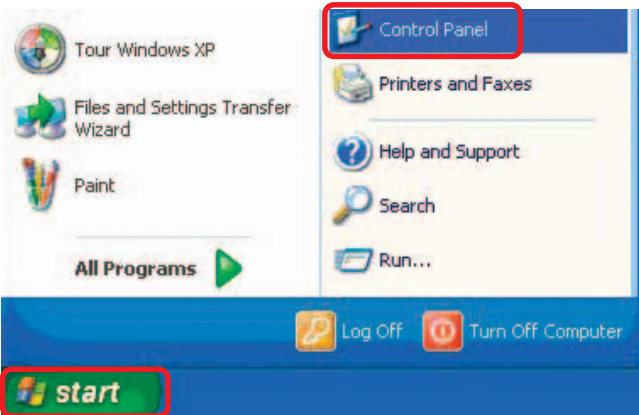


***Assigning a Static IP Address in Windows XP/2000***

***Note:** Residential Gateways/Broadband Routers will automatically assign IP Addresses to the computers on the network, using DHCP (Dynamic Host Configuration Protocol) technology. If you are using a DHCP-capable Gateway/Router you will not need to assign Static IP Addresses.*

If you are not using a DHCP capable Gateway/Router, or you need to assign a Static IP Address, please follow these instructions:

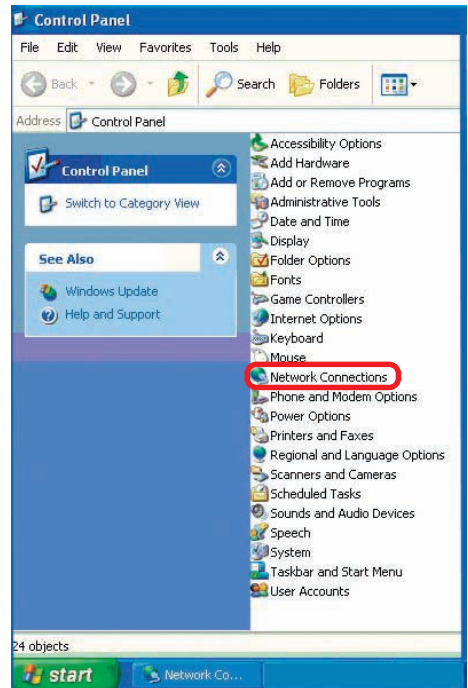
- Go to **Start**.
- Double-click on **Control Panel**.



## Networking Basics (continued)

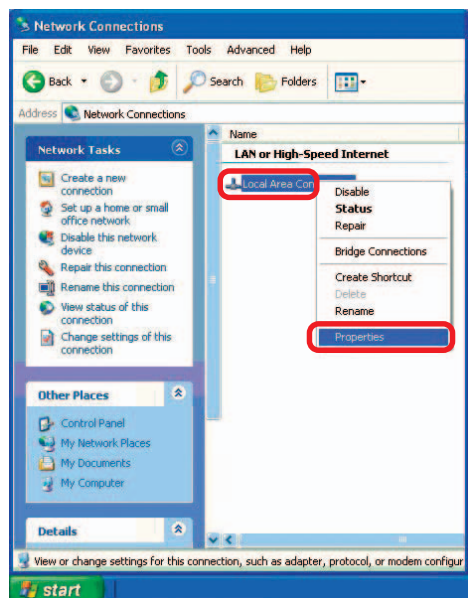
### Assigning a Static IP Address in Windows XP/2000

- Double-click on **Network Connections**.



- Right-click on **Local Area Connections**.

- Double-click on **Properties**.

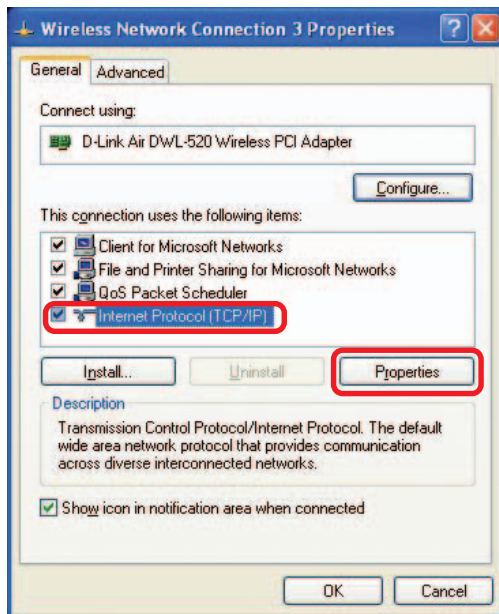


## Networking Basics (continued)

### Assigning a Static IP Address in Windows XP/2000

- Click on **Internet Protocol (TCP/IP)**.
- Click **Properties**.

Select **Use the following IP address** in the **Internet Protocol (TCP/IP) Properties** window (shown below)



- In the window below, select **Use the following IP address**. Input your **IP address and subnet mask**. (The IP addresses on your network must be within the same range. For example, if one computer has an IP address of 192.168.0.2, the other computers should have IP addresses that are sequential, like 192.168.0.3 and 192.168.0.4. The subnet mask must be the same for all the computers on the network.)

**IP Address:**

e.g., 192.168.0.2

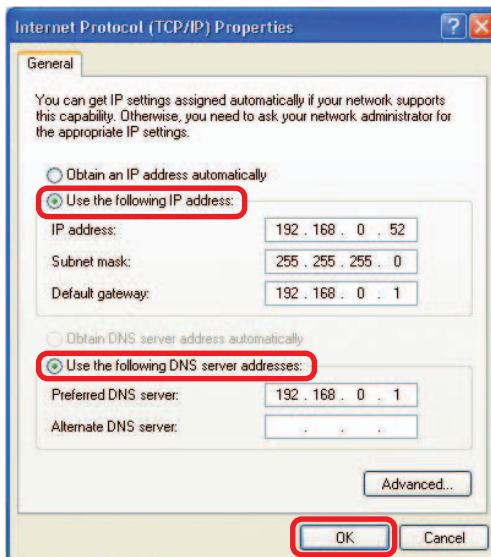
**Subnet Mask:**

255.255.255.0

**Default Gateway:**

Enter the LAN IP address of the wireless router. (D-Link wireless routers have a LAN IP address of 192.168.0.1)

- Select **Use the following DNS server address**. Enter the LAN IP address of the wireless router. (D-Link wireless routers have a LAN IP address of 192.168.0.1)
- Click **OK**.

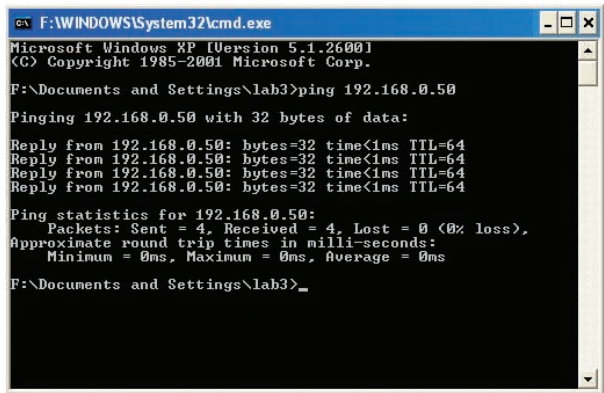


*You have completed the assignment of a static IP address. (You do not need to assign a static IP address if you have a DHCP-capable router.)*

## Networking Basics (continued)

### *Checking the Wireless Connection by Pinging in Windows XP/2000*

- Go to **Start > Run >** type **cmd**. A window similar to this one will appear. Type **ping**  
**xxx.xxx.xxx.xxx**, where **xxx** is the **IP address** of the wireless router or access point. A good wireless connection will show four replies from the wireless router or access point, as shown.



```

C:\F:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

F:\Documents and Settings\lab3>ping 192.168.0.50

Pinging 192.168.0.50 with 32 bytes of data:

Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64

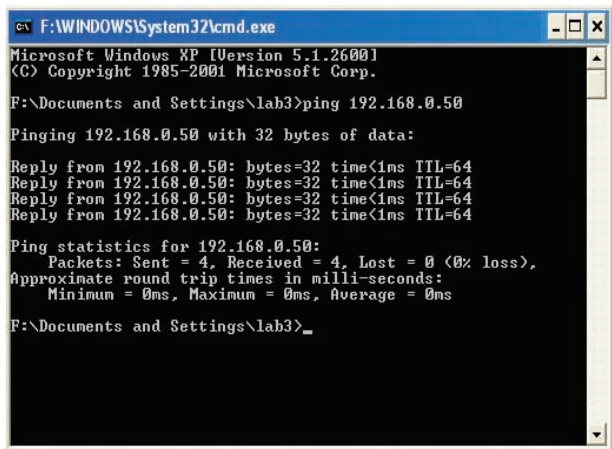
Ping statistics for 192.168.0.50:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

F:\Documents and Settings\lab3>_

```

### *Checking the Wireless Connection by Pinging in Windows Me /98SE*

- Go to **Start > Run >** type **command**. A window similar to this will appear. Type **ping**  
**xxx.xxx.xxx.xxx** where **xxx** is the **IP address** of the wireless router or access point. A good wireless connection will show four replies from the wireless router or access point, as shown.



```

C:\F:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

F:\Documents and Settings\lab3>ping 192.168.0.50

Pinging 192.168.0.50 with 32 bytes of data:

Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.50:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

F:\Documents and Settings\lab3>_

```

# Technical Specifications

## Standards

- IEEE 802.11b
- IEEE 802.11g
- IEEE 802.3
- IEEE 802.3u

## Device Management

- Web-Based – Internet Explorer v6 or later; Netscape Navigator v7 or later; or other Java-enabled browsers.

## Data Rate

For 802.11g:

- 54, 48, 36, 24, 18, 12, 9 and 6Mbps

For 802.11b:

- 11, 5.5, 2, and 1Mbps

## Security

- 64-, 128-bit WEP
- WPA – Wi-Fi Protected Access
- MAC Address Filtering
- SSID Broadcast Disable

## Wireless Frequency Range

- 2.412GHz to 2.462GHz

## Wireless Operating Range\*

802.11g (Full Power with internal antenna)

Outdoors:

- 164ft (50m) @ 54Mbps
- 492ft (150m) @ 11Mbps
- 656ft (200m) @ 6Mbps

## Power

- External Power Supply: DC 5V/1.2A

\* Environmental factors may adversely affect wireless range

# Technical Specifications (continued)

## Radio and Modulation Type

For 802.11g:

OFDM:

- BPSK @ 6 and 9Mbps
- QPSK @ 12 and 18Mbps
- 16QAM @ 24 and 36Mbps
- 64QAM @ 48 and 54Mbps

DSSS:

- DBPSK @ 1Mbps
- DQPSK @ 2Mbps
- CCK @ 5.5 and 11Mbps

For 802.11b:

DSSS:

- DBPSK @ 1Mbps
- DQPSK @ 2Mbps
- CCK @ 5.5 and 11Mbps

## Wireless Transmit Power

Typical RF Output Power at each Data Rate

For 802.11g:

- 31mW (15dBm) @ 54Mbps
- 40mW (16dBm) @ 48Mbps
- 40mW (16dBm) @ 36, 24, 18, 12, 9, and 6Mbps

For 802.11b:

- 50mW (17dBm) @ 11, 5.5, 2, and 1Mbps

## Receiver Sensitivity

For 802.11g:

- 6Mbps: -87dBm
- 9Mbps: -85dBm
- 12Mbps: -82dBm
- 18Mbps: -81dBm
- 24Mbps: -80dBm
- 36Mbps: -79dBm
- 48Mbps: -71dBm
- 54Mbps: -69dBm

For 802.11b:

- 1Mbps: -90dBm
- 2Mbps: -90dBm
- 5.5Mbps: -86dBm
- 11Mbps: -85dBm

# Technical Specifications (continued)

## LEDs

- Power
- LAN
- WLAN

## Temperature

- Operating: 32°F to 131°F (0°C to 55°C)
- Storing: -4°F to 149°F (-20°C to 65°C)

## Humidity

- Operating: 10%~90% (non-condensing)
- Storing: 5%~95% (non-condensing)

## Certifications

- FCC
- CE

## Dimensions

- L = 3.15 inches (80mm)
- W = 2.36 inches (60mm)
- H = 0.67 inches (17mm)

## Weight

- 0.11 lbs (50g)

## Warranty

- 1 Year

# Technical Support

You can find software updates and user documentation on the D-Link website.

D-Link provides free technical support for customers within the United States and within Canada for the duration of the warranty period on this product.

U.S. and Canadian customers can contact D-Link technical support through our website, or by phone.

## Tech Support for customers within the United States:

### ***D-Link Technical Support over the Telephone:***

(877) 453-5465

24 hours a day, seven days a week.

### ***D-Link Technical Support over the Internet:***

<http://support.dlink.com>

email:[support@dlink.com](mailto:support@dlink.com)

## Tech Support for customers within Canada:

### ***D-Link Technical Support over the Telephone:***

(800) 361-5265

Monday to Friday 7:30am to 12:00am EST

### ***D-Link Technical Support over the Internet:***

<http://support.dlink.ca>

email:[support@dlink.ca](mailto:support@dlink.ca)

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited warranty for its product only to the person or entity that originally purchased the product from:

- D-Link or its authorized reseller or distributor and
- Products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, addresses with an APO or FPO.

**Limited Warranty:** D-Link warrants that the hardware portion of the D-Link products described below will be free from material defects in workmanship and materials from the date of original retail purchase of the product, for the period set forth below applicable to the product type ("Warranty Period"), except as otherwise stated herein.

1-Year Limited Warranty for the Product(s) is defined as follows:

- Hardware (excluding power supplies and fans) One (1) Year
- Power Supplies and Fans One (1) Year
- Spare parts and spare kits Ninety (90) days

D-Link's sole obligation shall be to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund at D-Link's sole discretion. Such repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement Hardware need not be new or have an identical make, model or part. D-Link may in its sole discretion replace the defective Hardware (or any part thereof) with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement Hardware will be warranted for the remainder of the original Warranty Period from the date of original retail purchase. If a material defect is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to repair or replace the defective Hardware, the price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware (or part thereof) that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

**Limited Software Warranty:** D-Link warrants that the software portion of the product ("Software") will substantially conform to D-Link's then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days ("Warranty Period"), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. D-Link's sole obligation shall be to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link's functional specifications for the Software or to refund at D-Link's sole discretion. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Software will be warranted for the remainder of the original Warranty Period from the date of original retail purchase. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

**Non-Applicability of Warranty:** The Limited Warranty provided hereunder for hardware and software of D-Link's products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold "As-Is" without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

**Submitting A Claim:** The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same.

- The original product owner must obtain a Return Material Authorization (“RMA”) number from the Authorized D-Link Service Office and, if requested, provide written proof of purchase of the product (such as a copy of the dated purchase invoice for the product) before the warranty service is provided.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the Product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery (“COD”) is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link, with shipping charges prepaid. Expedited shipping is available if shipping charges are prepaid by the customer and upon request.
- Return Merchandise Ship-To Address  
**USA:** 17595 Mt. Herrmann, Fountain Valley, CA 92708  
**Canada:** 2180 Winston Park Drive, Oakville, ON, L6H 5W1 (Visit <http://www.dlink.ca> for detailed warranty information within Canada)

D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link’s reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

**What Is Not Covered:** This limited warranty provided by D-Link does not cover: Products, if in D-Link’s judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product. Repair by anyone other than D-Link or an Authorized D-Link Service Office will void this Warranty.

**Disclaimer of Other Warranties:** EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED “AS-IS” WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO NINETY (90) DAYS. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

**Limitation of Liability:** TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK’S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NON-CONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

**Governing Law:** This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This limited warranty provides specific legal rights and the product owner may also have other rights which vary from state to state.

**Trademarks:** D-Link is a registered trademark of D-Link Systems, Inc. Other trademarks or registered trademarks are the property of their respective manufacturers or owners.

**Copyright Statement:** No part of this publication or documentation accompanying this Product may be reproduced in any form or by any means or used to make any derivative such as translation, transformation, or adaptation without permission from D-Link Corporation/D-Link Systems, Inc., as stipulated by the United States Copyright Act of 1976. Contents are subject to change without prior notice. Copyright © 2002 by D-Link Corporation/D-Link Systems, Inc. All rights reserved.

**CE Mark Warning:** This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

**FCC statement:** Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**IMPORTANT NOTE:**

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. We declare that the product is limited in CH1~CH11 by specified firmware controlled in the USA.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Industry Canada statement:

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**IMPORTANT NOTE:**

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

**For detailed warranty outside the United States, please contact corresponding local D-Link office.**

**Register your D-Link product online at <http://support.dlink.com/register/>**